Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A method of adapting a pilot filter that processes received signals in a wireless communication network, the method comprising:

determining a velocity of a wireless communication device in relation to a wireless network infrastructure;

estimating a noise power estimate of at least one of the received signals; and

determining one or more coefficients of the pilot filter based on the determined velocity of the wireless communication device and the noise power estimate.

2. (Original) A method as defined in Claim 1, wherein determining the velocity of the wireless communication device and determining the one or more coefficients are performed in the wireless communication device.

3. (Original) A method as defined in Claim 1, wherein determining the velocity of the wireless communication device and determining the one of more coefficients are performed in the wireless network infrastructure.

4. (Original) A method as defined in Claim 1, wherein determining the velocity of the wireless communication device is performed in the wireless communication device, and determining the one or more coefficients are performed in the wireless network infrastructure.

5. (Original) A method as defined in Claim 1, wherein determining the velocity of the wireless communication device is performed in the wireless network infrastructure, and determining the one or more coefficients are performed in the wireless communication device.

6. (Original) A method as defined in Claim 1, further comprising applying the one or more coefficients to a pilot filter.

7. (Original) A method as defined in Claim 6, wherein applying the coefficients is performed in the wireless communication device.

8. (Original) A method as defined in Claim 6, wherein applying the coefficients is performed in the wireless network infrastructure.

9. (Original) A method as defined in Claim 1, wherein determining the velocity further comprises receiving velocity information from a global positioning system receiver.

10. (Original) A method as defined in Claim 1, wherein determining the velocity further comprises receiving at least two location measurements of the wireless communication device, wherein the measurements are made at different, known, times, and determining the velocity of the wireless communication device is based on the at least two location measurements and their respective measurement times.

11. (Original) A method as defined in Claim 1, wherein the wireless network infrastructure further comprises a base station.

12. (Canceled)

13. (Original) A method as defined in Claim 1, wherein the pilot filter is a finite impulse response filter.

14. (Original) A method as defined in Claim 1, wherein the pilot filter is an infinite impulse response filter.

15. (Previously presented) A method as defined in Claim 1, wherein determining the one or more coefficients further includes selecting the one or more coefficients from a set of predetermined coefficients.

16. (Currently Amended) A communication device comprising:

a pilot filter that receives pilot signal samples over a communication channel; and

a controller that determines filter coefficients of the pilot filter based on the wireless communication device velocity and an estimate of noise power in the communication channel, and adapts the pilot filter to the communication channel.

17. (Canceled)

18. (Original) A communication deice as defined in claim 16, further comprising a set of predetermined coefficients.

19. (Original) A communication device as defined in Claim 18, wherein the predetermined coefficients are retrieved from a look up table.

20. (Original) A communication device as defined in Claim 16, wherein the velocity of the communication device is determined in accordance with information from a global positioning system receiver.

21. (Original) A communication device as defined in Claim 16, wherein the velocity of the communication device is determined in accordance with at least two location measurements of the communication device, wherein the measurements are made at different, known times, and the velocity of the communication device is based on the at least two location measurements and their respective measurement times.

22. (Original) A communication device as defined in Claim 16, wherein the pilot filter is a finite impulse response filter.

23. (Original) A communication device as defined in Claim 16, wherein the pilot filter is an infinite impulse response filter.

24. (Original) A communication device comprising:

a plurality of pilot filters each of which is configured to receive a pilot signal and to output a filtered pilot signal; and

a controller configured to select one of the plurality of pilot filter outputs based on the wireless communication device velocity and one of the plurality of pilot filters based on an estimate of noise power.

25. (Canceled)

26. (Original) A communication device as defined in Claim 24, wherein the plurality of filters are configured to be adapted by changing filter coefficients.

27. (Original) A communication device as defined in Claim 26, wherein the controller determines filter coefficients for the plurality of pilot filters based on the communication device velocity.

28. (Original) A communication device as defined in Claim 27, wherein the filter coefficients are selected from a set of predetermined filter coefficients.

29. (Original) A communication device as defined in Claim 28, wherein the predetermined coefficients are retrieved from a look up table.

30. (Previously presented) A communication device as defined in Claim 24, wherein the velocity of the communication device is determined based on information from a global positioning system receiver.

31. (Original) A communication device as defined in Claim 24, wherein the velocity of the communication device is determined in accordance with at least two location measurements of the communication device, wherein the measurements are made at different, known times, and

the velocity of the communication device is based on the at least two location measurements and their respective measurement times.

32. (Original) A communication device as defined in Claim 24, wherein the plurality of pilot filters are finite impulse response filters.

33. (Original) A communication device as defined in Claim 24, wherein the plurality of pilot filter are infinite impulse response filters.

34. (Original) A communication device as defined in Claim 24, wherein the plurality of pilot filters comprise finite impulse response filters and infinite impulse response filters.

35. (Original) A wireless communication system comprising:

at least one mobile wireless communication device with a pilot filter that is configured to accept coefficients that adapt the operation of the filter to a communication channel response; and

an infrastructure device configured to communicate with the at least one mobile wireless communication device, wherein the infrastructure device receives signals from the mobile wireless communication device and based on those signals determines pilot filter coefficients and transmits the coefficients to the mobile wireless communication device for use in configuring the pilot filter.

36. (Original) A wireless communication system as defined in Claim 35, wherein the infrastructure includes a base station.

37. (Original) A wireless communication system as defined in Claim 35, wherein the signals received from the mobile wireless communication device include an estimate of a noise power level in the communication channel.

38. (Original) A wireless communication system as defined in Claim 35, wherein the signals received from the mobile wireless communication device include an estimate of the mobile wireless communication device velocity.

39. (Original) A wireless communication system comprising:

at least one mobile wireless communication device with a pilot filter that is configured to accept coefficients that adapt the operation of the filter to a communication channel response; and

an infrastructure device configured to communicate with the at least one mobile wireless communication device, wherein the infrastructure device receives signals from the mobile wireless communication device and based on those signals and measurements made in the infrastructure, determines pilot filter coefficients and transmits the coefficients to the mobile wireless communication device for use in configuring the pilot filter.

40. (Original) A wireless communication system as defined in Claim 39, wherein the infrastructure includes a base station.

41. (Original) A wireless communication system as defined in Claim 39, wherein the signals received from the mobile wireless communication device include an estimate of a noise power level in the communication channel.

42. (Original) A wireless communication system as defined in Claim 39, wherein the measurements made in the infrastructure include an estimate of the mobile wireless communication device velocity.

43. (Original) A wireless communication system comprising:

at least one mobile wireless communication device; and

an infrastructure device with a pilot filter configured to receive a signal transmitted from the mobile wireless communication device over a communication channel and to accept coefficients that adapt the response of the filter, wherein the infrastructure device receives signals

from the mobile wireless communication device and, based on those signals, a set of coefficients that are provided to the pilot filter are determined.

44. (Original) A wireless communication system as defined in Claim 43, wherein the infrastructure includes a base station.

45. (Original) A wireless communication system as defined in Claim 43, wherein the signals received from the mobile wireless communication device include an estimate of a noise power leveling the communication channel.

46. (Original) A wireless communication system as defined in Claim 43, wherein the infrastructure estimates a velocity of the mobile wireless communication device and uses the velocity estimate in determining the set of coefficients.

47. (Original) A wireless communication device as defined in Claim 43 wherein the pilot filter is a finite impulse response filter.

48. (Original) A wireless communication device as defined in Claim 43 wherein the pilot filter is an infinite impulse response filter.

49. (Original) A wireless communication device as defined in Claim 43, wherein the infrastructure device further comprises a plurality of pilot filters.

50. (Previously presented) A method as defined in Claim 1, wherein the one or more coefficients vary with an increase in the determined velocity, and the one or more coefficients vary with a decrease in the determined velocity.

51. (Previously presented) A method as defined in Claim 1, wherein:
the pilot filter receives a plurality of pilot symbols; and

each symbol of the plurality is multiplied by the at least one of the one or more coefficients.

52. (Previously presented) A method as defined in Claim 1, wherein the coefficients are selected to adapt the pilot filter to a communication channel having an optimal performance.

53. (Previously presented) A method as defined in Claim 1, further comprising:

adapting the pilot filter to a communication channel having an optimal performance.

54. (Previously presented) A communication device as defined in Claim 16, further comprising a receiver which is configured to:

receive a modulated signal comprising a pilot signal and a traffic signal;

equalize the modulated signal;

produce the data from the equalized signal comprising the pilot signal samples.